

Amendments to the Claims

Claims 1-23 (Canceled).

24. (Withdrawn) A method of forming a refractory metal silicide layer comprising:

forming a titanium metal layer on and in direct physical contact with a silicon containing material comprised by a substrate;

after forming the titanium metal layer, providing compressive stress inducing atoms into the titanium metal layer, the compressive stress inducing atoms being larger than silicon atoms;

after the providing, first annealing the titanium metal layer containing the compressive stress inducing atoms to form a titanium silicide layer substantially of a first crystalline phase; and

second annealing the titanium silicide layer substantially of the first crystalline phase under conditions effective to transform said titanium silicide layer to a more dense layer substantially of a second crystalline phase.

Claims 25-44 (Canceled).

45. (Currently amended) A method of forming a refractory metal silicide comprising:

forming a compressive stress inducing material layer over a first side of a substrate;

forming a refractory metal silicide on and in direct physical contact with an upper surface of the compressive stress inducing material layer, the refractory metal silicide comprising a first crystalline phase; and

after forming the refractory metal silicide comprising a first crystalline phase, annealing the refractory metal comprising a first crystalline phase at a temperature of less than or equal to about 750°C to form a refractory metal silicide of a second crystalline phase; the compressive stress inducing material inducing sufficient compressive stress to lower an energy of activation for transformation of the first crystalline phase to the second crystalline phase.

Claims 46-51 (Canceled).

52. (Withdrawn) The method of Claim 24, where the first crystalline phase is C49 and the second crystalline phase is C54.

53. (Withdrawn) The method of Claim 24, where the compressive stress inducing atoms comprise germanium atoms.

54. (Withdrawn) The method of Claim 24, where the first crystalline phase is C49, the second crystalline phase is C54 and the compressive stress inducing atoms comprise germanium atoms.

55. (Previously presented) The method of Claim 45, where the first crystalline phase is C49 and the second crystalline phase is C54.

56. (Previously presented) The method of Claim 45, where the compressive stress inducing material layer comprises silicon oxide or silicon nitride.

57. (Previously presented) The method of Claim 45, where the refractory metal silicide comprises titanium silicide.

58. (Previously presented) The method of Claim 57, where the first crystalline phase is C49 and the second crystalline phase is C54.

59. (Withdrawn) A method of forming a refractory metal silicide layer comprising:

forming a titanium metal layer on and in direct physical contact with a silicon containing material comprised by a substrate;

after the forming the titanium metal layer, implanting compressive stress inducing atoms comprising germanium into the titanium metal layer;

first annealing the titanium metal layer containing the compressive stress inducing atoms to form a titanium silicide layer substantially comprising a first crystalline phase after providing compressive stress inducing atoms; and

second annealing the titanium silicide layer substantially comprising the first crystalline phase under conditions effective to transform the titanium silicide layer to a denser layer substantially comprising a second crystalline phase.

60. (Withdrawn) The method of claim 59, wherein first annealing comprises first annealing the titanium metal layer to form C49 crystalline phase.

61. (Withdrawn) The method of claim 59, wherein second annealing comprises second annealing the first crystalline phase to form C54 second crystalline phase.

Claims 62-70. (Canceled)

71. (Currently amended) A method of forming a refractory metal silicide comprising:

forming a compressive stress inducing material layer over a first side of a substrate;

forming a refractory metal silicide on and in direct physical contact with the compressive stress inducing material layer, the refractory metal silicide comprising a first crystalline phase; and

after forming the refractory metal silicide comprising the first crystalline phase, annealing the compressive stress inducing material layer and the refractory metal silicide comprising a first crystalline phase to form a refractory metal silicide of a second crystalline phase; the compressive stress inducing material inducing sufficient compressive stress to lower an energy of activation for transformation of the first crystalline phase to the second crystalline phase.

72. (Previously presented) The method of claim 71, wherein forming a compressive stress inducing material layer comprises forming a layer comprising materials chosen from a group consisting of silicon nitride and silicon dioxide.

73. (Previously presented) The method of claim 71, wherein forming a refractory metal silicide comprises forming titanium silicide.

Claims 74-78 (Canceled).